

“ RESEARCH FOR TRANSFORMING MATERNAL HEALTH “



Transforming Global
Maternal, Adolescent
and Child Health:
From Research
Evidence to Practice
and Policy

Presented by

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“Every day we hear about the dangers of cancer, heart disease and AIDS. But how many of us realize that, in much of the world, the act of giving life to a child is still the biggest killer of women of child-bearing age?”

– Liya Kebede

WHY MATERNAL & CHILD HEALTH CONSIDERED IMPORTANT



- Mothers and children not only constitute a large group but they are also vulnerable or a special group
- They comprise of 71.4% of population of developing countries like India, Bangladesh, Nigeria etc.
- So mothers and children are the foremost priorities of the community health programme

WHAT IS MATERNAL AND CHILD HEALTH



According to WHO (1976)

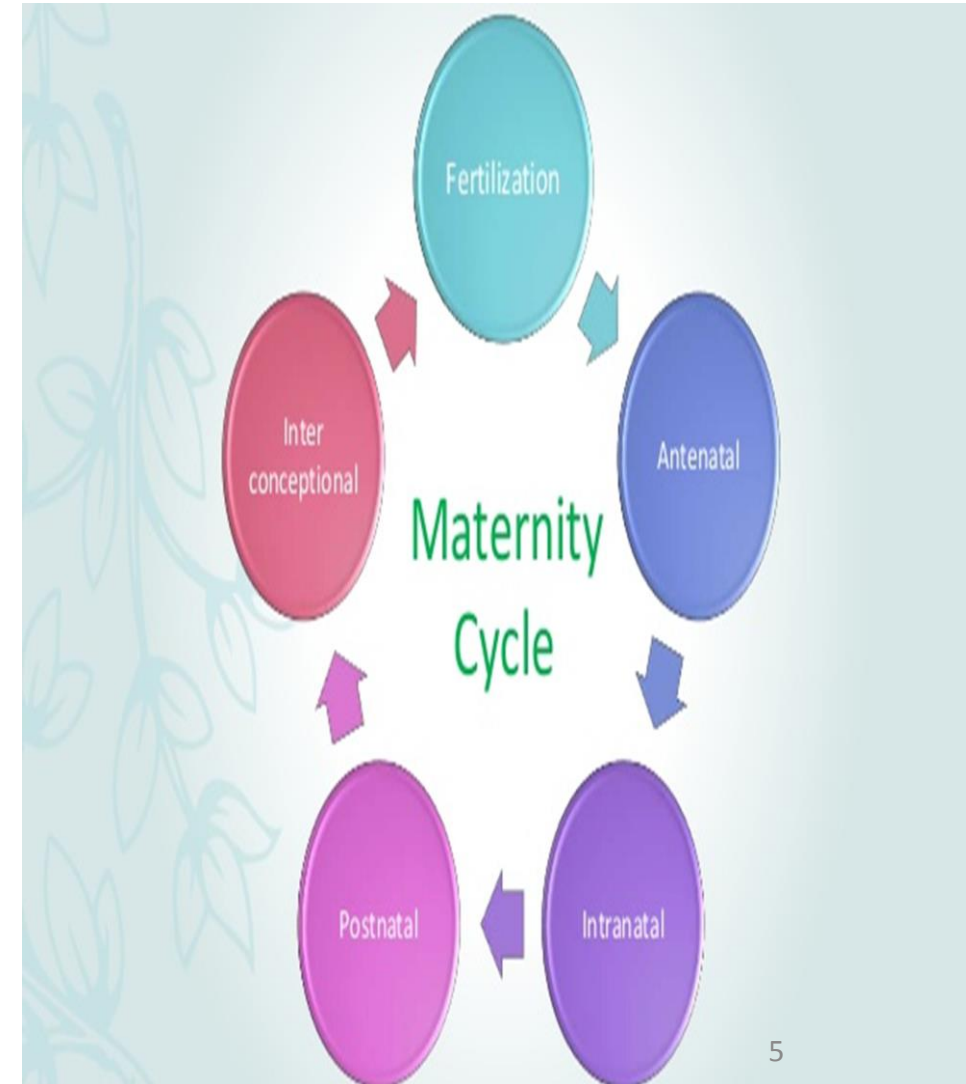
- **Maternal health** refers to the health of women during pregnancy, childbirth and the postnatal period.
- The term “**Maternal and Child Health services**” refers to the “ **preventive , promotive, curative, therapeutic or rehabilitative health care** for the mothers and children “
- It includes the subareas of Maternal health, Child health, family planning, School child, Handicapped children, adolescence, and care of children in special setting such as day care centres.



NEED FOR MCH SERVICES

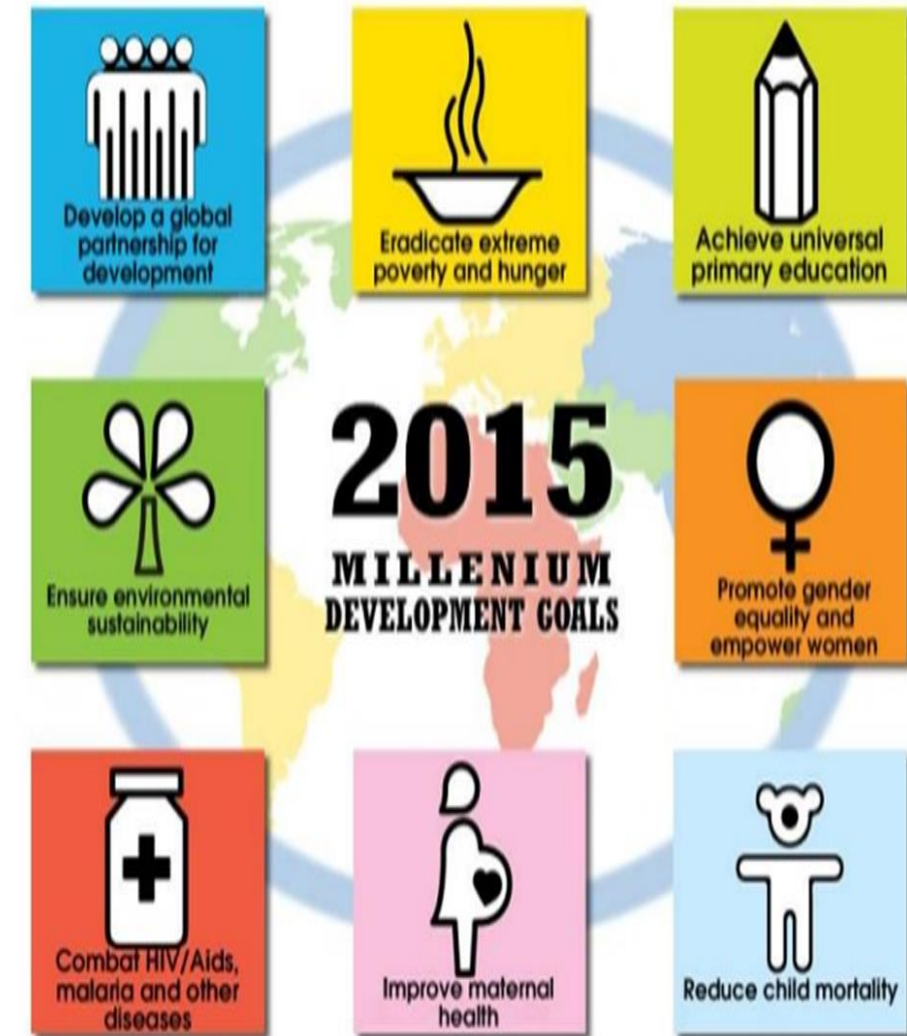
1. Mother and child below 15 years make up the majority of the population in almost countries
2. Mother and children constitute a **“Special risk” or vulnerable group** in the case of illness , deaths in the terms of pregnancy , child birth of mothers and growth and development in the case of children
3. By improving the **health of the mothers and children** we can improve the health of the family and community
4. Ensuring child survival is a **future investment** for family and community

Each stage should be a positive experience, ensuring women and their babies reach their full potential for health and well-being.



Objectives – MCH Services

- **Reduction of maternal, perinatal, infant and child hood mortality and morbidity**
- Promotion of reproductive health
- Promotion of the physical and psychological development of the child and adolescent within the family
- Prevent malnutrition
- Prevent communicable diseases
- Early diagnosis and treatment of the health Problems
- Health education and family planning services
- Child survival
- Ensure birth of a healthy baby



**ULTIMATE OBJECTIVE OF MCH SERVICES IS
LIFELONG HEALTH**

Indicators of maternal and child health programme

Maternal and child health can be evaluated on the basis of the following indicators

1. Maternal mortality rate below 1 (for every 1000 live births)
2. Infant mortality rate below 30 (for every 1000 live births)
3. Death rate of 1-4 year old age group below 10
4. Size of family 2-3 members
5. Perinatal mortality rate 30 – 35

Health Status of
Mother and Child are
Prime Indicator of
Assessing Health
Situation of a
Country

Global scenario – Maternal health.

According to the fact sheet – WHO (2017)

- WHO (2017) estimates that of **5,36,000** maternal deaths occurring globally
- Every day in 2017, approximately 810 **women died from preventable causes related to pregnancy and childbirth.**
- Between 2000 and 2017, the maternal mortality ratio (MMR, number of maternal deaths per 100,000 live births) **dropped by about 38% worldwide.**
- 94% of all maternal deaths occur in low income countries (Tajikistan, Nepal, Yemen etc) and lower middle-income countries (India, Bangladesh, Bhutan, Pakistan)
- Young adolescents (ages 10-14) face a higher risk of complications and death as a result of pregnancy than other women.

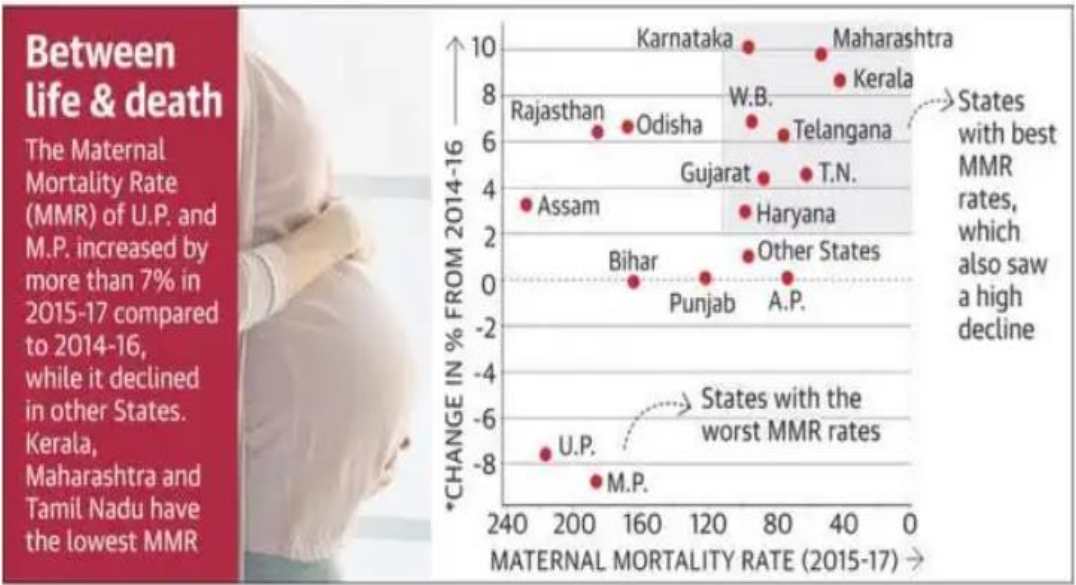
Maternal health situation in India.

- WHO (2017) estimates that of **5,36, 000** maternal deaths occurring globally each year, **1,36,000** deaths takes place in India.
- India, with a population of over a billion and **decadal growth of 21%**, estimated its maternal mortality ratio (MMR) at 301 (maternal deaths per 1,00,000 live births) in 2003.

MMR: India's MMR at 122(SRS 2015-17) has improved significantly from 130(SRS 2014-16)

Goal Indicator	ALL INDIA STAUS					
Maternal mortality rate SRS – (Sample registration survey)	254 (SRS) 2004 - 2006	212 (SRS) 2007-2009	178 (SRS) 2010 - 2012	167 (SRS) 2011 - 2013	130 (SRS) 2014 - 2016	122 (SRS) 2015 -2017

into three groups: empowered action group (EAG), southern States and other states.



- The maternal mortality rate of U.P and M.P increased by more than 7% in 2015 – 17 compared to 2014 – 16, while it declined in other states, Kerala, Maharashtra and Tamilnadu have the lowest MMR

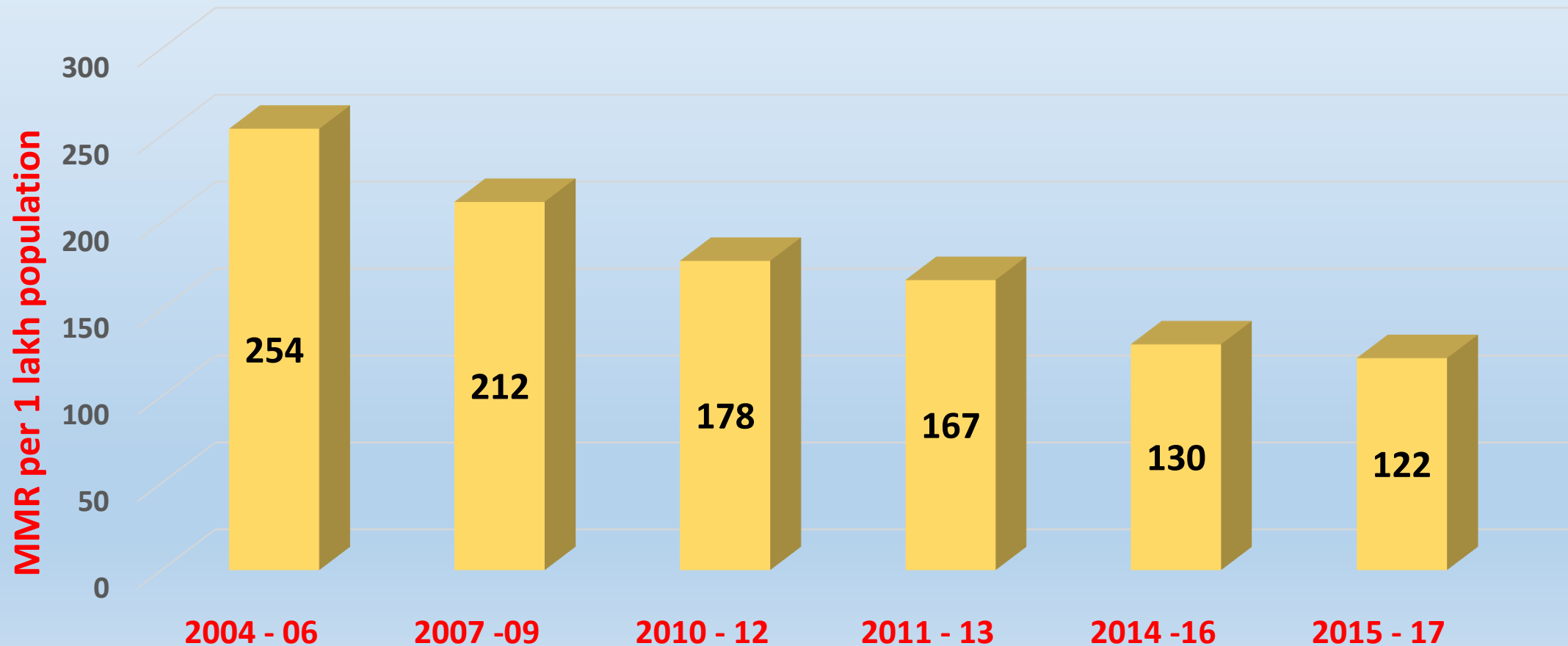
- Retaining its **first position** , **Kerala** has reduced its MMR fro 46 in 2014 -2016 to 42 in 2015 -2017.

- Like wise, **Maharashtra retained its second position** with 55 (down from 61) and

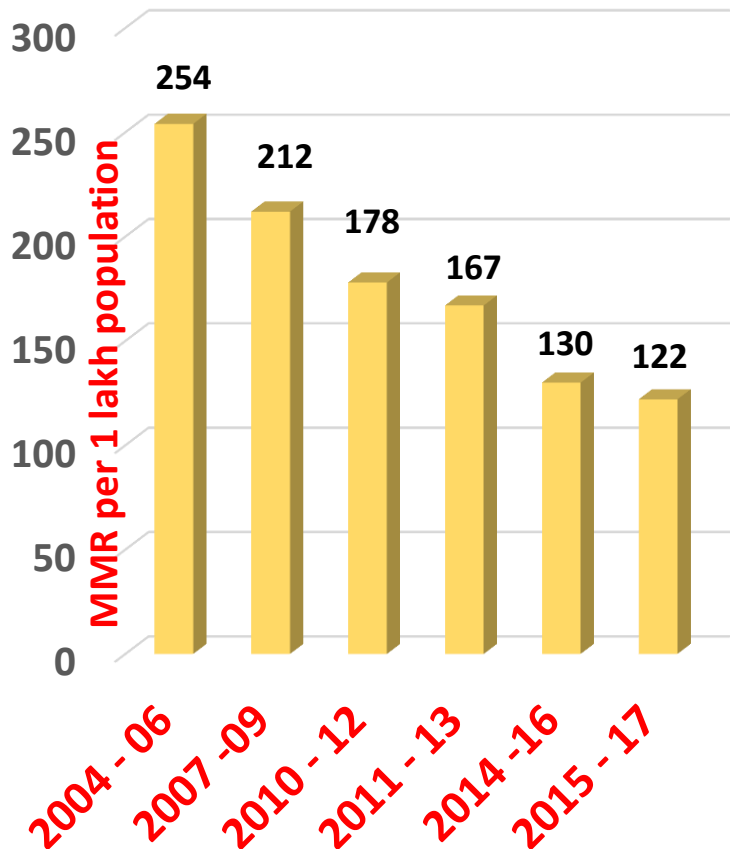
- Tamilnadu its third position** with 63(down from 66)

Karnataka has shown the highest percentage decline in Maternal Mortality Ratio, Uttar Pradesh and Madhya Pradesh have shown an increase by 15 points.

MMR: India's MMR at 122(SRS 2015-17) has improved significantly from 130(SRS 2014-16)



SRS Bulletin (2015 – 17) – 2000 deaths averted per year



- Maternal Mortality Ratio of India has declined 130/ 100,000 live births in 2014-16 to 122/ 100,000 live births in 2015-17 (6.2 per cent decline)
- This translates to 2000 additional mothers saved annually in 2017 as compared to 2015
- 11 States (Kerala, Maharashtra, Tamilnadu, Andrapradesh, Jharkhand, Telegana, Gujarat, Utrakhnad, West Bengal, Karnataka and Haryana.) **have achieved the National Health Policy target of MMR 100 per lakh live births well ahead of 2020.**
- **Good news for India** – as nearly 2000 maternal deaths have been averted
- Though the Total annual deaths declined from 32,000 maternal deaths in 2015 to 30,000 deaths in 2017. This translated to every 20 minutes a mother dying due to pregnancy or childbirth related cause.

How was it achieved .



- **The Government of India has been focusing on initiatives to improve maternal health indicators- Quality service provision**
- **Quality Ante Natal care** – minimum 4 antenatal visits, AN natal packages, counselling, early detection of high risk pregnancies
- **Essential Obstetric Care during Delivery** –Free institutional deliveries, 24X7 PHC services, providing training to SNs/LHVs/ANMs under Skilled Attendance at Birth
- **Post natal care for Mother and New born** -Ensuring post-natal care within first 24 hours of delivery, subsequent home visits on 3rd, 7th, 14th and 42nd day, important components for identification and management of emergencies occurring during post-natal period

How was it achieved..



Ministry of Health and Family Welfare
Government of India

- **Provision of Emergency Obstetric and Neonatal Care at FRUs** -critical components such as manpower, blood storage units and referral linkages etc. Availability of trained manpower
- **Referral Services at both Community and Institutional level** - Basic patient care transportation through ambulances with an aim to reach to the beneficiary in rural area for quick service delivery.
- **Comprehensive abortion care services**
- **Provision of RTI /STI services**
- **Village health and nutrition day- National rural health mission – AWC’s- every month - Thursdays**
- **Information systems for maternal health – MDSR(maternal death surveillance and response), MCH portal, MCP cards.**

How was it achieved.



Focus on quality and coverage of health services through public health

Initiatives under the National Health Mission such as- FLAG SHIP PROGRAMMES

- **LaQshya, -Labour room Quality improvement Initiative.** focused and targeted approach to **strengthen key processes related to the labour rooms and maternity operation theatres** which aims at improving quality of care around birth and ensuring Respectful Maternity Care.
- **Poshan Abhiyan,-** Holistic Nutrition for to **improve nutritional outcomes for children, pregnant women and lactating mothers.**
- **Pradhan Mantri Surakshit Matritva Abhiyan,** -Mantri Surakshit Matritva Abhiyan was launched in 2016 to ensure **quality antenatal care and high risk pregnancy detection** in pregnant women on 9th of every month.
- **Janani Shishu Suraksha Karyakram,** -1st June, 2011, which **entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including Caesarean section.**



How was it achieved.

- **Janani Suraksha Yojana-** demand **promotion and conditional cash transfer scheme** was launched in April 2005, promoting institutional delivery among poor pregnant women.
- **Pradhan Mantri Matru Vandana Yojana** - is a maternity benefit program run by the Government of India. It was introduced in 2017 and is implemented by the Ministry of Women and Child Development. It is a **conditional cash transfer scheme for pregnant and lactating women of 19 years of age or above for the first live birth.**
- **Surakshit Matritva Aashwasan Initiative (Suman)** - The Union Government has launched Surakshit Matritva Aashwasan (SUMAN) to **provide quality healthcare at zero cost to pregnant women, new mothers and newborns.**

have contributed to this decline.

Worth to Note.



- Much progress has been made in ending preventable maternal deaths in the past two decades.
- **Globally the** number of women and girls who die each year due to issues related to pregnancy and childbirth has dropped considerably, from 4,51,000 in 2000 to 295,000 in 2017, a 38 per cent decrease.
- **In India** the number of women and girls who die each year due to issues related to pregnancy and childbirth has dropped considerably, from 103,000 in 2000 to 35000 in 2017, a 55 per cent decrease.
- This decline is important for India as this has been possible in view of the gains made in institutional deliveries and focused approach towards aspirational districts and inter-sectoral action to reach the most marginalized and vulnerable mothers.

But What to note???.



- Although important progress has been made in the last two decades, about **1,36,000 deaths takes place in India**. **women** died during and following pregnancy and childbirth in 2017. This number is **unacceptably high**.
- The most common direct causes of maternal injury and death are excessive blood loss, infection, high blood pressure, unsafe abortion, and obstructed labour, as well as indirect causes such as anemia, malaria, and heart disease. - **they are largely preventable and treated**
- However, **coverage of life-saving health interventions and practices remains low** due to gaps in knowledge, policies and availability of resources.

What should we committed to .

- Ending preventable maternal death must remain at the top of the global agenda.
- At the same time, **simply surviving pregnancy and childbirth with complications** can never be the marker of successful maternal health care.
- The WHO last year lauded India's progress in reducing the MMR saying the progress puts the country on track towards achieving the Sustainable Development Goal (SDG) target of an MMR below 70 by 2030
- "India is now committed to ensuring that **not a single mother or newborn dies** due to a preventable cause and **move towards zero preventable maternal and newborn deaths**

Vision 2030 Universal access to sexual and reproductive health and reproductive rights

-  End unmet need for family planning
-  End preventable maternal deaths
-  End gender-based violence and harmful practices

Leave no one behind



Making Pregnancy safer focuses strategies - (Published by the department of making pregnancy safer – 2016)

1. Advocacy
2. Technical support to countries
3. Partnership building
4. Norms , standards and tools development
- 5. Research**
6. Monitoring and evaluation of global efforts



Why research is important in Health ???

- To translate the research into health policy making
- Helps in identifying innovative evidence-based solutions
- Quality research is a fundamental aspect of evidence based decision-making, and promoting research as a tool for solving health problems.
- **Strengthening stakeholder commitment** - collaborative management efforts promote the identification of research needs and priorities, and strengthen collaboration among researchers, policymakers and other health stakeholders to foster trust and partnership



Why research is important in health ???.

- To better strengthen evidence-based **decision-making** and reinforce practices, **research and health information should be integrated**
- Research that identifies **additional strategies for encouraging healthy behaviors** can contribute significantly to the success of health interventions that **rely on patient compliance over time.**
- Health research has high value to society. Not only It can provide important information about disease trends and risk factors, outcomes of treatment or health interventions, functional abilities, patterns of care, but also to **allocate the health care costs and use.**



Role of research in transforming Maternal health...

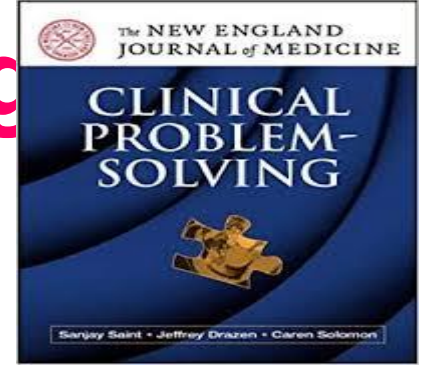
- The challenge for research in the 21st century is **to identify interventions** that can **reduce maternal, neonatal, and fetal mortality** in the developing world and thus make childbirth a safe event.
- This will require **particular attention to the obstetric and neonatal problems** of populations with high mortality.
- Assessing whether **research priorities** in maternal health **align with the main causes of mortality**, and those **factors responsible for inequitable health** outcomes, such as **health system performance**, may help direct **future research**.
- **Promising interventions** must be tested with trials that are **both rigorous and practical**.
- **Successful interventions must be monitored** and adjusted for optimal effectiveness.

Role of research in transforming Maternal health..

- A wide range of **basic and applied research need to be encouraged and funded** through partnerships of ministries of health, international organizations and development agencies, nongovernmental organizations, and philanthropic foundations
- Improving the quality and availability of **maternal mortality data is a national priority**
- Research **should addresses Key priorities that can accelerate maternal health, identify the scientific gaps** such as risk prediction, severe morbidity, optimal timing for delivery, maternal long-term outcomes, etc
- **Complexities of Research on the social determinants** of maternal morbidity and death and inform the development of new equitable approaches to improve maternal health.



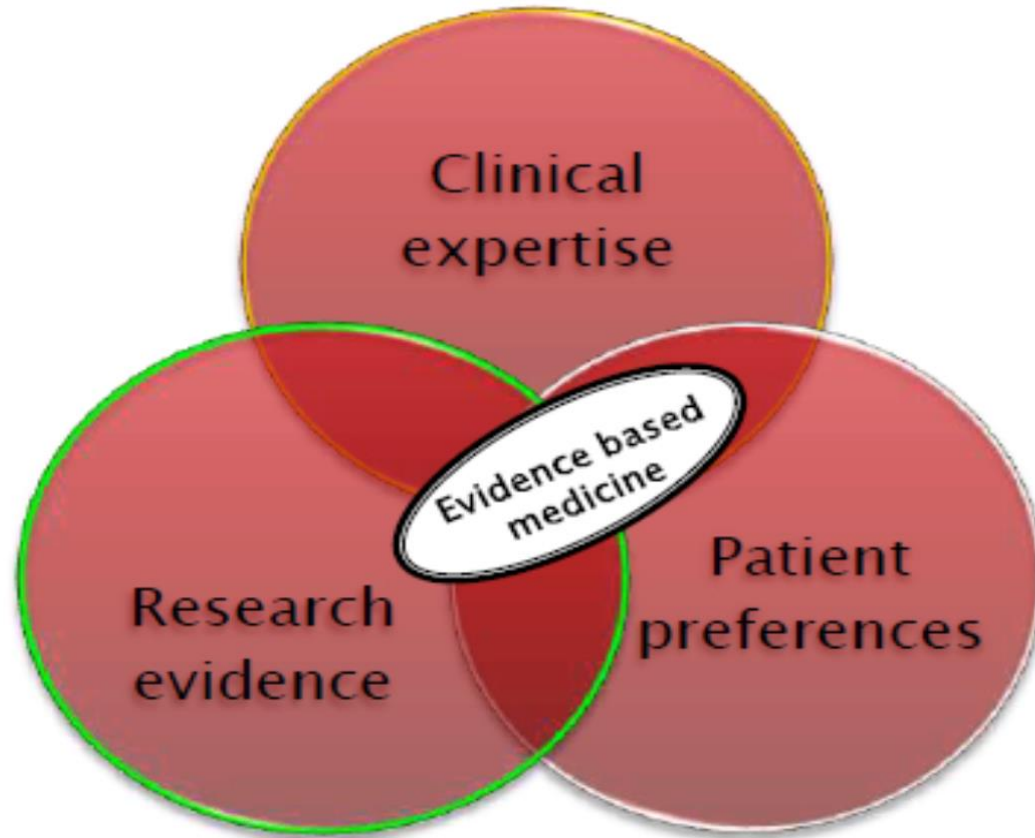
Research & development – a vital strategy for transforming maternal health



- A recent perspective in the *New England Journal of Medicine (2018)* - discussed the various measures that can be implemented to reduce maternal mortality rates but did not emphasize **the crucial role of research** not only in understanding the breadth of the public health problem but also in identifying innovative evidence-based solutions.
- Research is **important to support achievement of global targets** , where **research generated evidence-based strategies can pave way to end preventable maternal mortality (EPMM)** and thus can improve maternal health and well-being
- It becomes **utmost important that research can break the Obstacles of implementing effective interventions and disseminating knowledge** which **delays progress** particularly in the **least developed countries** and most vulnerable population – the mother and child

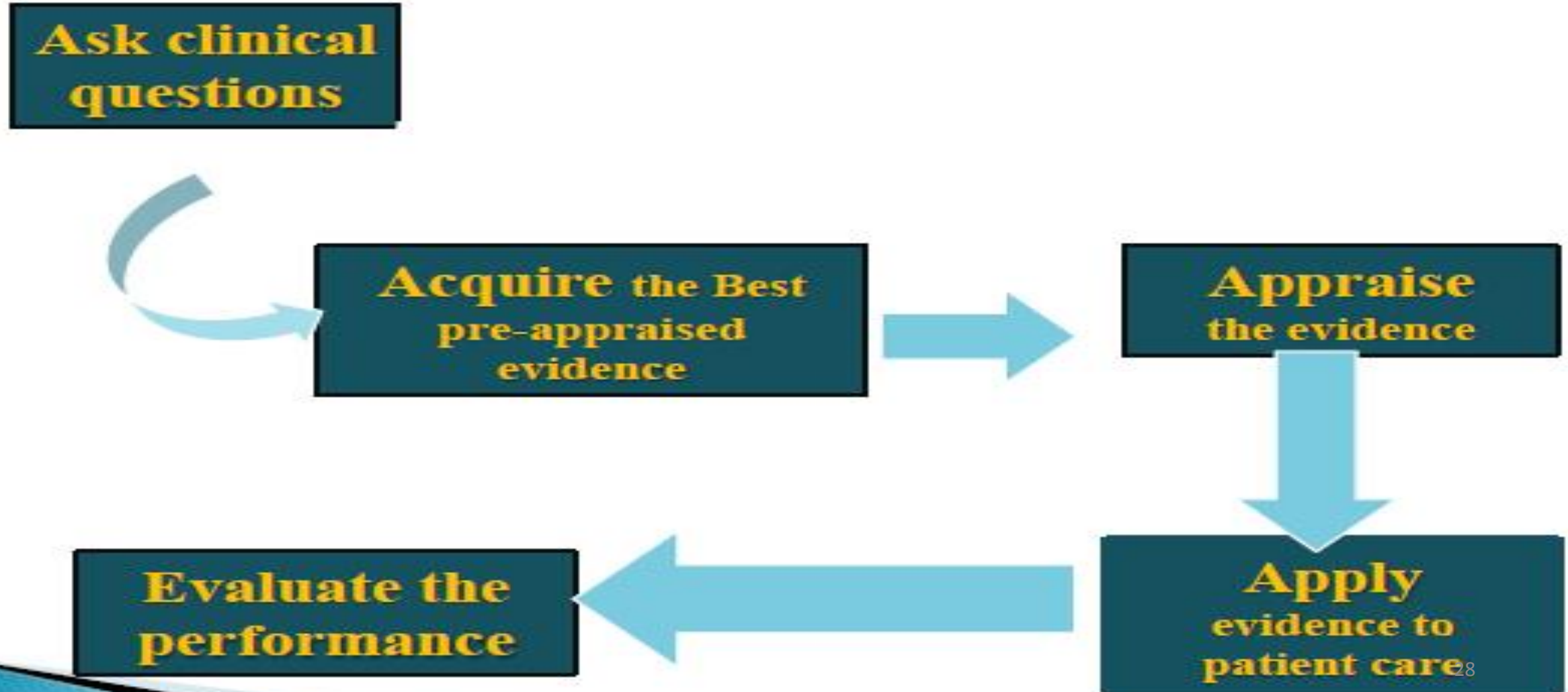
Strengthening R&D is an important complementary strategy to health service provision for addressing the global burden of maternal diseases

Evidence based Medicine - What



The integration of best research evidence with clinical experience and patient values (sacket et al 2019)

Evidence based Medicine - How ?



Levels of Evidence

for Therapy Question

Level of Evidence	Type of Study
1a	Systematic reviews of randomized controlled trials (RCTs)
1b	Individual RCTs with narrow confidence interval
2a	Systematic reviews of cohort studies
2b	Individual cohort studies and low-quality RCTs
3a	Systematic reviews of case-control studies
3b	Case-control studies
4	Case series and poor quality cohort and case-control studies
5	Expert opinion

Levels of evidence (2001). Centre for Evidence Based Medicine. Retrieved 26 Aug 2008 from <http://www.cebm.net/index.aspx?o=1025>

What type of researches are Important..

- **Clinical trials** can provide important information about the efficacy and adverse effects of medical interventions by controlling the variables that could impact the results of the study, No single researcher or single site can bring all the expertise to develop and validate medical innovations or to ensure their safety.
- **Information-based research** – using health information databases, is often faster , less expensive than experimental studies can analyze very large sets of data, can detect unexpected phenomena or differences among subpopulations compared to clinical trials. But it is limited for its less statistical rigor than clinical studies
- **Epidemiological research** to study of the occurrence, distribution, and control of diseases in populations.
- **Laboratory research** to understand how a disease works
- **Record based studies** access personal data without face-to-face contact, e.g. examining patients’ medical records to see if treatment was successful.
- **Technology studies** – develop new technology for diagnosis and treatment.
- **Behavioral studies** to test how people act in different ways



What type of researches are Important.

- **Community based participatory research** which engages partners as equal participants in the research
- **Genetic studies** to find the role of genes in different diseases
- **Observational studies** to see the reaction or the response observed in a group of people
- **Prevention studies** to test ways to prevent specific conditions or diseases.
- **Public health research** tries to improve the health and well-being of people from a *population-level* perspective.
- **Large populations research** are required to facilitate comparison of patient populations and to calculate risk/benefit estimates.

Efficient sharing of information between institutions is even more important



Researches in track with the causes on Maternal mortality

Haemorrhage

- Post partum haemorrhage-is **the leading contributor to maternal mortality** worldwide, causing about 24 percent of all maternal deaths.
- **Knowing** the **cause** of Immediate PPH is commonly due to **uterine atony, inadequate contraction of the uterus, and a retained placenta or placental fragments, perineal and cervical tears**, still remains a significant cause for MMR
- PPH is any blood loss that causes a physiological change such as low blood pressure that threatens a woman's life . When blood transfusions are required, women are exposed to the risk of infection with HIV, hepatitis B, C, and D, malaria, syphilis, cytomegalovirus, and other agents if blood supplies are unscreened and unsafe.
- Severe anaemia-Severe anemia, common in developing countries, contributes to high mortality from postpartum hemorrhage



Researches in track with the causes on Maternal mortality.

- **Management of PPH** - manual removal of the placenta; bimanual uterine compression; repair of cervical, vaginal, or perineal lacerations; administration of parenteral oxytocic's; and uterine massage.
- The medications used to control postpartum hemorrhage includes oxytocin (pitocin) 10 IU IM/IV, methylergonovine (Methergine), 15-methyl PGF (Hemabate), and Dinoprostone (Prostin E2), oral misoprostol 600mg.
- Unfortunately, most of these require parenteral administration and/or refrigeration, conditions that make them unsuitable for use in many rural areas of developing countries.
- Misoprostol, is a possible mean of preventing postpartum hemorrhage as part of active management of third-stage labor, also appears promising as a means of controlling hemorrhage, particularly in low-resource settings.
- Unlike other oxytocic agents, misoprostol does not require refrigeration, an important advantage
- Additional research is also needed to identify better options for the management of obstetric hemorrhage –Non -pneumatic Anti-shock garment
 - **Finding best strategies for preventing and treating is the utmost priority**



Researches in track with the causes on Maternal n

Infections – Sepsis



- The second leading cause of maternal mortality, sepsis, is estimated to cause 15 percent of all maternal deaths worldwide caused by transfer of an infectious agent from the cervix or vagina to the uterus during labor or pelvic examination or by transfer of bacteria from skin, nostrils, and perineum by contaminated fingers or instrument.
- Coupled with the unavailability and inappropriate use of effective antibiotics, relatively minor puerperal infections can rapidly become life-threatening.
- Women who survive puerperal sepsis are frequently left to cope with chronic ill health due to pelvic pain, dysmenorrhea, menorrhagia, and/or infertility
- Information on the incidence and outcome of puerperal sepsis is limited because the majority of women in developing countries deliver at home or are in a clinic or hospital only briefly
- Routine antibiotics prophylaxis is not recommended in uncomplicated vaginal birth. Concerns about the potential public health implications of the high rate of routine use of antibiotics following vaginal birth without any specific factors has to be studied.
- **Prevention and management of maternal infection – Research on timely use of antibiotics to reduce maternal morbidity and mortality**

Researches in track with the causes on Maternal mortality.



Hypertensive Disease of Pregnancy

- Eclampsia is estimated to cause approximately 12 percent of all deaths due to pregnancy-related causes in developing countries
- Several studies suggest that mortality associated with hypertensive disease of pregnancy is more difficult to prevent than deaths due to other pregnancy-related causes (Duley, 2011; Moodley, 2000; Loudon, 2006).
- **Antihypertensive treatment for women with mild to moderate hypertension during pregnancy remains controversial**
- **Management of hypertensive diseases in pregnancy – Use of calcium, aspirin, Vit C, Diagnosis of Preeclampsia, Mothers at risk ,- still lacks evidence**

Researches in track with the causes on Maternal mortality.



- **Prevention of anemia** – predisposed by geographic area and season, 60 mg of elemental iron and 400 micrograms of folic acid daily to reduce the prevalence of severe maternal anemia, but there is **inconclusive evidence of a beneficial effect** on pregnancy outcomes for either mother or child .
- **Rigorous trials need to examine more successful strategies for supplementing iron consumption in communities where iron deficiency is common and anemia is a serious health problem**
- **Evidence is insufficient**, however, with regard to the clinical efficacy and cost-effectiveness of **nutritional supplementation** designed specifically to prevent maternal morbidity and mortality, particularly in comparison with other intervention

Researches in track with the causes on Maternal m

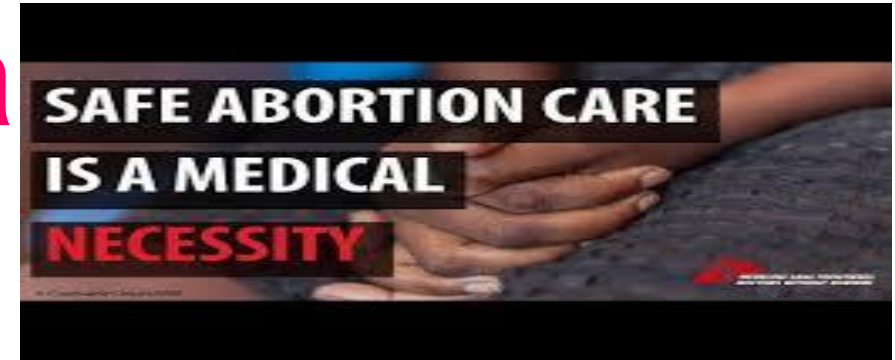


Obstructed Labour

- Obstructed labour is estimated to cause 8 percent of all maternal deaths and also presents serious risks for the fetus and neonate
- Obstructed labor can often be anticipated, as it is caused by mechanical factors. Women whose growth has been stunted by malnutrition or untreated infection or who bear children before pelvic growth is complete are at greatest risk for cephalopelvic disproportion, disproportion between the size of the infant's head and the bony birth canal, which is the main cause of obstructed labor; fetal malpresentation is another, less common cause
- Prolonged obstructed labor may produce injuries to multiple organ systems, such as vesico-vaginal or recto-vaginal fistulae, and women with such injuries face serious social problems, such as divorce; exclusion from religious and other social activities; and ultimately, worsening poverty and malnutrition

Management of obstructed labour – Lack of skill to use vacuum, forceps among the health care providers should be investigated, so that the increased the incidence of Caesarean section can be reduced.

Researches in track with the causes on Maternal morta



Unsafe abortion

- WHO estimates that about one-quarter of all pregnancies end in abortion, a total of 50 million per year. Of these abortions, an estimated 20 million are performed with unsafe methods, by untrained providers, or by the woman herself
- Unsafe abortion can lead to a variety of complications, including sepsis, hemorrhage, genital and abdominal trauma, tetanus, perforated uterus, and poisoning from abortifacient medicines
- Moreover, the treatment of abortion complications consumes a disproportionate share of limited health care resources in developing countries

Allocation of funds to abortion care services should be studied

Prevention of abortion related morbidity and mortality – use of contraceptives preventing unwanted pregnancy, challenges in using contraception devices, contraceptive failure., legal safe abortion not available to many women should be studied.

Researches in track with the causes on Maternal mortality.

Malaria

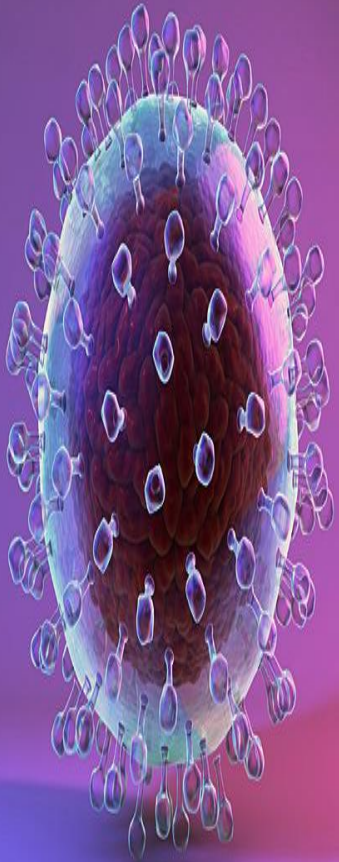
- Malaria in pregnancy has serious health consequences for the newborn, as well as for the mother
- In areas of low malarial transmission, immunity is low, and infection during pregnancy can cause severe disease, including fever and central nervous system complications
- **Research on Prevention and treatment of malaria is required** because it is clearly associated with reduced frequency of disease— lower antenatal parasitemia, lower malarial infection, less anemia, and fewer episodes of fever, and fewer low birth weight infants and preterm births.
- **Research on the safety and efficacy of new drugs and drug combinations** should target pregnant women.



Researches in track with the causes on Maternal mortality.

Viral hepatitis is a global pandemic

Viral hepatitis



- Viral hepatitis is the most common cause of liver disease during pregnancy .
- Pregnant women who contract hepatitis E during the third trimester appear highly susceptible to developing a fulminant infection.
- Even when the mother escapes liver failure, this infection often causes a fetal death

Researches in track with the causes on Maternal mortality.

Management of labour

- **First stage of labour** – use of partograph can prevent maternal mortality associated with Obstructed and prolonged labour. Though heard by 90% of them still in Nigeria, only 25 percent used it. **Hindering factors to use them should be investigated**, **Labour progression** – 12 hrs in first labour and thereafter for subsequent deliveries - 10 hrs - **excessive use of augmentation** – uterine over stimulation, still births, birth asphyxia etc should be studied.
- **Second stage of labour** – decisions on curtailing second stage of labour, Labour positions, use of birthing tools, Bearing down pattern, fundal pressure, Episiotomies leading to perineal trauma – **inconclusive evidence to make policies and protocols**.
- **Active management of third stage of labour**- oral or rectal misoprostol, an inexpensive, stable drug, shows promise for reducing postpartum hemorrhage, CCT , uterine massage, delayed cord cutting, breast crawl, routing suction of the newborn, which need to be **studies for including them in the protocol of PPH Management**



Researches in track with the causes on Maternal mortality.



Essential obstetric care

- Basic EOC involves six signal services: antibiotic, oxytocic, and anticonvulsant drugs; manual removal of the placenta; removal of retained products of conception (by manual vacuum aspiration with a large syringe); and performance of assisted vaginal delivery (manual assistance, vacuum extraction, or forceps delivery).
- Basic EOC can save women's lives by stabilizing them before referral and **but still the journey to avail** that may take many hours putting the mother at risk
 - **Research on barriers that lead to reaching EOC for mothers at rural area is required**

Skilled attendance at child birth

- an accurate estimate of the effectiveness of skilled attendance at childbirth on reducing maternal mortality would **require a very large population study.**

Researches in track with the causes on Maternal mortality.

- Development and treatment of **mental health conditions** and the impact on pregnancy, which includes research on appropriate medication dosing during pregnancy and after delivery.

Information based research on

- Prenatal counselling to recognise signs of complications among at risk mothers
- Prenatal counselling to use a skilled birth attendant
- Provision of clinical strategies during child birth



Researches in track with the causes on Maternal mortality.

Interventions

Lets just sit down and talk it out



InterventionsOnDemand

- **Overused or inappropriate interventions** – CS over used, Episiotomies, birth companion, mobility during labour, routine use of oxytocic's– **first stage and second stage is controversial** which may lead to hyperstimulate or cause uterine contracture
- **Inappropriate interventions** – pubic shaving, enema, and vacuum and forceps extraction, vaginal examination, Reducing both overuse and inappropriate use of interventions during labor and delivery **need to be best addressed by basing clinical practice on a strong evidence base.**



Alignment of Maternal–Infant Research Priorities From Kennedy et al. (2016)...

- Evaluate the **effectiveness of midwifery care across the continuum** in increasing access to and **acceptability of family planning services** for women
- Evaluate the **effectiveness of midwife-led care compared to other models of care across various settings**, particularly on rates of fetal and infant death, preterm birth, and low birth weight.
- Determine **which indicators are most valuable in assessing quality maternal and new-born care**.
- Identify and **describe aspects of care that optimize and those that disturb the biological and physiologic processes** for healthy childbearing women, fetuses, newborns, infants, and those who experience complications.



Alignment of Maternal–Infant Research Priorities From Kennedy et al. (2016),..

- Assess the views and preferences of women and families across a variety of settings about their experiences of maternal and newborn care including but not limited to care providers and sites of care.
- Describe and evaluate the effectiveness of midwives working with others (such as other health professionals, community health workers, traditional birth attendants) in achieving quality maternal and newborn care including
 - Timely transfer of women to appropriate
 - level/site of care
 - Management of emergency situations
 - Maximal use of skills and competencies
 - Shared decision making and
 - Accountability



Alignment of Maternal–Infant Research Priorities From Kennedy et al. (2016),.

- Develop **setting-specific benchmarks** to assess measurable progress on implementation of quality maternal and new-born care.
- Identify and **describe aspects of maternal and newborn** care that **strengthen or weaken** women’s psychosocial well-being and mental health.
- Assess **whether new measures of morbidity** are **needed** to more effectively evaluate outcomes of maternal and new-born care.

Research Priorities - American College of Nurse-Midwives (ACNM)..



- **Innovative ways to prepare more midwife providers** especially from diverse and under-represented groups
- **International maternal–child health issues** such as safe motherhood , the work of midwives globally
- Opportunities to collaborate on research with other professional organizations
- Explore and develop policy research relevant to the goals of Maternal health

Research Priorities - American College of Nurse-Midwives (ACNM).



- Research linkages between midwifery care practices and specific maternal and neonatal outcomes, e.g., out of hospital birth.
- Inequities and disparities in women's health.
- Women's decision-making processes on choice of providers during pregnancy and birth.
- Women's decision-making processes about health care procedures and interventions.
- Midwifery education
- Identify barriers to and opportunities for the development of a diverse midwifery workforce

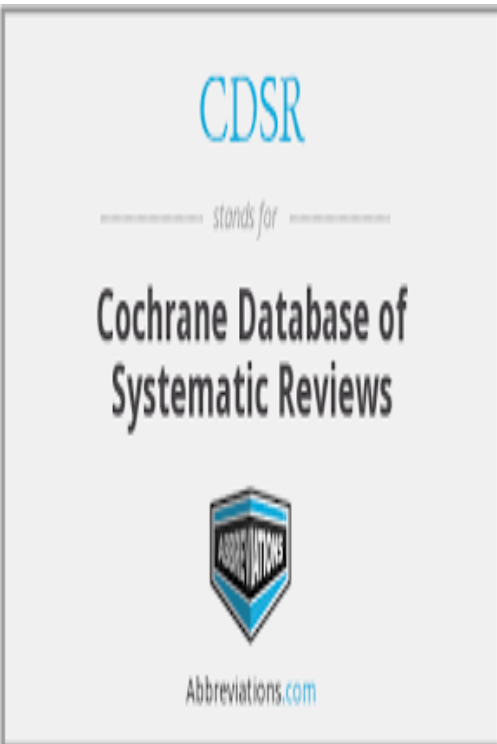
Ongoing Researches in progress for transforming maternal health

- From Cochrane Database of Systematic Reviews (CDSR) 10 (2018)

Issues 9–

Systematic Reviews in CDSR: Women's Health

- Antibiotic treatment for the sexual partners of women with bacterial vaginosis
- Chinese herbal medicine for sub fertile women with polycystic ovarian syndrome
- Exercise for women receiving adjuvant therapy for breast cancer
- Methods of milk expression for lactating women
- Screening for genital chlamydia infection
- Chewing gum for enhancing early recovery of bowel function after cesarean section
- Dietary supplementation with myo-inositol in women during pregnancy for treating gestational diabetes



What to focus in future.....



- **Strengthening the availability of evidence** -Funding research to increase the availability of evidence that supports informed decision-making in the field of mother and infant health.
- **Capacity building** -To build individual and institutional capacities, grants to training bursaries to young researchers , which can set up a network of research institutions to support researchers' professional development, exchanges and collaboration
- **Strengthening knowledge transfer and partnership platforms** -To promote the dissemination and use of research results, collaboration with individuals and institutions with expertise in maternal and infant health research
- **Supports the implementation** of a knowledge transfer platform for the use of evidence in developing and implementing policies and programmes in maternal and individual health

What to focus in future.



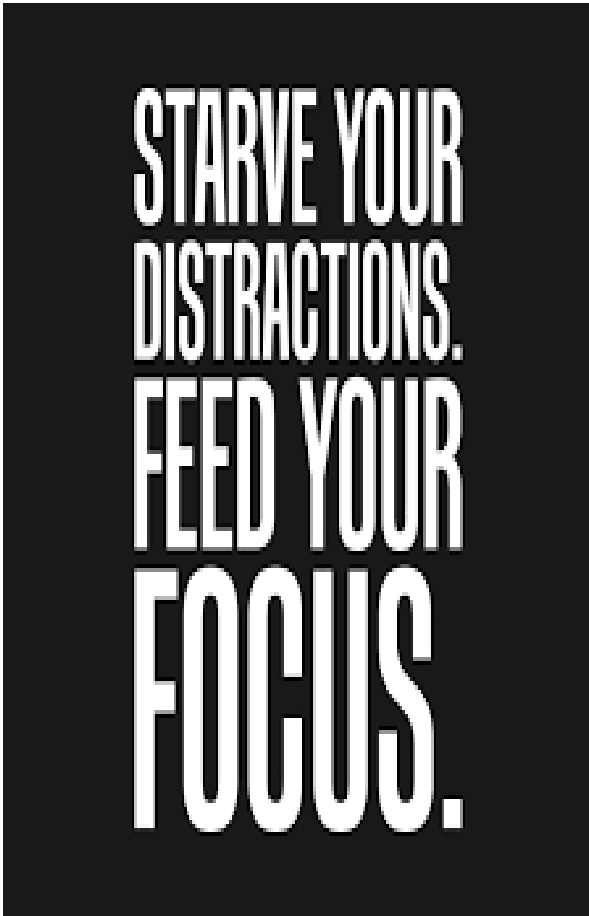
- **Strategically reposition maternal health** within the Sustainable Development Goals, especially concerning the potential for research in health systems, health promotion and conditions such as hemorrhage to reduce the differential health outcomes between population groups.
- **Advocate for funding** to better reflect the distribution of maternal ill health and the causes thereof, with more attention given to hemorrhage and hypertension research in developing countries and to studies on STIs worldwide.
- **Translate the high priority given to maternal health by policy makers and donors into increased research funding**, by convincing them of what could be achieved with increased resources.
- Optimize funder coordination, with information sharing, joint priority setting, redirection of research resources and each funder taking responsibility for advancing knowledge on certain topics and regions so as to **avoid duplication of efforts**.



What to focus in future..

- Journals play a larger role in building research leadership in LMICs, by, for example, using **part of article processing fees** to provide **editing and statistical assistance**, and advice on improving articles prior to peer review.
- **Developing a method to assist policy makers, donors and stakeholders** in understanding the potential of different research avenues to contribute to reducing the burden of disease and disability.
- This method is participatory, **identifies weaknesses and strengths of proposed research** options and enables transparent prioritization for research investment
- Strengthen research leadership in LMICs by, for example, **including more funded opportunities for developing research ideas, analyzing data and completing publications.**

What to focus in future.



STARVE YOUR
DISTRACTIONS.
FEED YOUR
FOCUS.

- We need researchers who conduct research that addresses **the fundamental concerns of Maternal health** : maintaining health, addressing complex health conditions, enhancing quality of life, and improving health care systems
- Otherwise, **nurses and midwives are left to follow evidence-based practice guidelines based on the research priorities of investigators from other professions.**
- Without **research by nurses and midwives, un-investigated practices** commonly used by these types of providers tend to be valued in our health care systems, by our collaborators, and by our patients.
- Most women's and maternal-infant health research priorities focus on the treatment of complications which is in line with a diagnosis and treatment model of medical care (Kennedy et al., 2016).

By contrast, the research priorities should focus on prevention.

Research priorities for students in future...

The identified knowledge gaps were prioritized by considering whether such research would be feasible, innovative, original, likely to promote equity and contribute to the improvement of maternal and perinatal health.

The prioritized list includes:

- Evaluate effectiveness of the recommended package of postnatal care (content, number and timing of contacts) in improving maternal and newborn outcomes.
- Find the optimal timing of discharging mothers and babies from health facilities in LMICs.
- Evaluate the role of a post-discharge checklist during postnatal care contacts.
- Evaluate different approaches to provide psychosocial support to women after birth.
- Combine cause- and time-specific maternal and neonatal mortality and morbidity data to make suggestions on appropriate timing of visits.
- Epidemiology of maternal depression, tools to identify depression's contribution to suicide, prevention strategies.
- Evaluate a package of interventions to prevent sepsis in the mother and newborn.
- Prevalence and adverse effects of routine antibiotics after vaginal birth



Research priorities for students in future..



- **Effect of increasing caesarean section rate on postnatal care.**
- **Qualitative research on care of small babies.**
- **Oral nutrition in labor.**
- **Ambulation and freedom of movement in labor are safe, more satisfying for women, and facilitate the progress of labor.**
- **Hydrotherapy is safe and effective in decreasing pain during active labor.**
- **Continuous labor support**
- **Second-stage management should be individualized and support an initial period of passive descent and self-directed open-glottis pushing.**
- **There is no evidence to support routine episiotomy or aggressive perineal massage at birth.**
- **Delayed cord clamping on neonatal outcomes.**
- **Immediate skin-to-skin contact , breast crawl after birth promotes thermoregulation, improves initial breastfeeding, and facilitates early maternal-infant bonding.**

Research priorities for students in future.

- Have patience with labor progress.
- Vaginal birth after cesarean is safe for most women.
- Prematurity and pre-term birth
- HIV and AIDS in developing countries
- Contraceptive use dynamics
- Environmental exposures related to reproductive and developmental outcomes
- Drug and alcohol use during pregnancy
- Tobacco use during pregnancy
- Violence against women
- Prevention of unintended pregnancy and STIs
- Obesity among reproductive-aged women



CONCLUSION

- It is evident that research is a more significant predictor of utilization of maternal health care than access.
- In summary, although there has been some improvement in the quality of maternal health services in the last decade, India is still a long way off from the standards in most emerging economies leave alone developed countries.
- No country ever achieves sustainable transformation without achieving maternal health
- Unless the health system is able to ensure good quality care through research, translating into continued and sustained use of maternal health services throughout the country, **achievement of Sustainable Development Goals 2030 – to end maternal death** will likely remain out of reach for a long time





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- https://www.youtube.com/watch?v=X_4SIEhBXSII